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Abstract

This deliverable provides the analysis and shaping of Ethical and Legal frameworks for design of the technological solution, deployment and testing of eEnviPer in every pilot country and post-project exploitation.

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Executive Summary

The principal aim of the eEnviPer project is to provide an integrated web-based single multi-purpose cloud platform based on Service Oriented Architecture (SOA) to support environment-related permit procedures. The platform will be tested in five different European countries, namely Greece, Italy, Serbia, Croatia and Turkey.

The eEnviPer Ethical and Legal analysis report aims to identify ethical problems that may arise during the life of the project implementation and beyond and to set the related legal framework both on national and European levels.

In terms of Ethical and Legal issues, five different aspects of the eEnviPer project are recognized and analyzed:

- it is an e-Government service
- it is related to the environmental issues
- it will provide GIS tools to allow users to access the relevant spatial data/information
- human subjects will be involved in the testing
- exploitation phase

For each of the aspect, general ethical principals are determined and potential threats are investigated. The ethical principles are backed by legislations that address the issues. This is done on both the project level and on the pilots' level with the aim to find out any pilot specific issue and to identify national legal frameworks.

1 Introduction

Development and exploitation of the eEnviPer platform should respect fundamental ethical principles. It is, therefore, essential to analyse ethical concerns and to evaluate risks and benefits that can appear throughout system design, pilot deployment and post-project exploitation.

Ethical framework in which we are researching to define the domain appropriate for eEnviPer is shaped by the United Nation's conventions, European Union (EU) legislation and national legislations of the pilot countries (Greece, Italy, Serbia, Croatia and Turkey). By EU legislature it is meant Treaties (including Charter of Fundamental Human Rights), Directives, Regulations, Decisions etc.

This report will also serve as the strategy of how to handle recognized (certain and potential) ethical issues.

2 Environment related issues

eEnviPer platform is aimed to serve as a tool in an essentially environment protection process. General ethical framework related to the environment is shaped in the Convention on access to information, public participation in decision-making and access to justice in Environmental Matters (**Aarhus Convention**) signed in 1998 and ratified by most of the European countries and the European Union (decision 2005/370/EC).

As an international instrument for the protection of the environment this Convention contains three groups of principles relating to:

The right of citizens to access to information;

“Any environmental information held by a public authority must be provided when requested by a member of the public, unless it can be shown to fall within a finite list of exempt categories” (source: UNECE¹)

The right of citizens to participate in decisions about the environment;

“The Convention sets out minimum requirements for public participation in various categories of environmental decision-making” (source: UNECE)

The right to access the justice when the previous two rights are violated.

“The third pillar of the Convention (article 9) aims to provide access to justice in three contexts:

- review procedures with respect to information requests
- review procedures with respect to specific (project-type) decisions which are subject to public participation requirements, and
- challenges to breaches of environmental law in general.

Thus the inclusion of an 'access to justice' pillar not only underpins the first two pillars; it also points the way to empowering citizens and NGOs to assist in the enforcement of the law.” (source: UNECE)

European Union applied principles of the Convention in its legislature. **Directive 2007/2/EC** of the European Parliament and of the Council of 14 March 2007 on the establishment of an infrastructure for spatial information in the European Union (Infrastructure for Spatial Information in the European Community - INSPIRE) was published in the Official Journal of the European Union's 25th April 2007 and entered

¹ <http://www.unece.org/>

into force on 15 May 2007. The Directive aims to establish an infrastructure for spatial information in the European Union for the policies and activities that may have an impact on the environment. According to INSPIRE Directive, spatial data relevant for the environment have to be available to everybody for viewing purpose free of charge. Both spatial data (relevant for the environment) and spatial data services are bringing benefits of better environmental assessment and also benefits for the society: increased efficiency or effectiveness of the public sector organizations, greater business opportunities for private sector (Craglia et al., 2009)

INSPIRE Directive provides a reference to other directives that can be applied to geographic data sets and services, such as **Directive 2003/4/EC** on public access to environmental information and **Directive 2003/98EC** on re-use of public sector information (PSI Directive).

Regarding the relationship between INSPIRE and PSI Directive, INSPIRE directive will apply to sets of geographic data and services whose provision is necessary for carrying out public tasks that may have an impact on the environment, while PSI directive is applied to the other geographic data sets and services.

2003/4/ES Directive of the European Parliament and the Council on public access to environmental information (Directive on public access to environmental information), passed on 28 January 2003.

Directive regulates the rules that ensure free access to and dissemination of environmental information held by public authorities and defines the basic terms and conditions under which such information should be made available. It also defines the term “environmental information”:

”Information in relation to the environment means any written information available visual, audio, electronic or any other form of state of water, air, soil, fauna, flora, land and natural areas, as well as measures or activities that affect the environment or that are designed for their protection.”

The Directive aims to guarantee that environmental information is systematically available and disseminated to the public, which means:

- Establishing of international, national, regional and local agreements on the environment;
- Policies, plans and programs on the environment;
- Reporting on the state of the environment;
- Study of environmental impact and risk assessment.

Member States must guarantee that public authorities make environmental information in their jurisdiction available to any person or legal entity upon request.

3 eEnviPer as an e-Government service

e-Government services allow people to perform different kinds of transactions through web browsers, no matter where they are or when they are performing the tasks. They also present essentially different communication between the stakeholders involved in administrative procedures as well as data/information retrieving, processing and management. Being an e-Government service, the use of eEnviPer can raise ethical issues connected to government transactions no matter what technology is used to execute them and the ethical issues that are specific to the electronic nature of the service. Considering the domain of eEnviPer, the solution has to obey to the principles of privacy protection, no-discrimination principle, no-defamation and insulting, data security and IPR.

3.1 Protection of privacy

Privacy is enabled by protection of personal data. According to Data Protection **Directive (95/46/EC)** of the EC, personal data “mean any information relating to an identified or identifiable natural person (‘data subject’); an identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one of more factors specific to his physical, physiological, mental, economic, cultural or social identity”.

The same Directive also defines personal data processing as “any operation or set of operations which is performed upon personal data, whether or not by automatic means, such as collection, recording, organization, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, blocking, erasure or destruction.”

There are several legal acts within the EU legislature that address and regulate the issue:

- **Charter of Fundamental rights of the EU**

Article 7 states that “everyone has the right respect for private and family life, home and communications”

Article 8 regulates that “Everyone has the right to the protection of personal data concerning him or her” and that processing of such data must be “on the basis of the consent of the person concerned or some other legitimate basis laid down by law”).

- **Directive 95/46/EC (Data protection Directive)**

The Directive regulates the processing of personal data regardless of whether such processing is automated or not. The principle is that personal data should not be processed at all, except when certain conditions are met.

Article 6(b): Personal data must be “collected for specified, explicit and legitimate purposes and not further processed in a way incompatible with those purposes.”

Article 7 defines criteria for making personal data processing legitimate:

- the data subject has given his consent

or

- processing is necessary for the performance of or the entering into a contract the data subject is party

- processing is necessary for compliance with a legal obligation the controller is subject

- processing is necessary in order to protect the vital interests of the data subject

- processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller or in a third party to whom the data are disclosed

- processing is necessary for the purposes of the legitimate interests pursued by the controller or by the third party or parties to whom the data are disclosed, except where such interests are overridden by the interests for fundamental rights and freedoms of the data subject.

- **Directive 2002/58/EC (Directive on privacy and electronic communications, also known as e-Privacy Directive)**

It is concerning the processing of personal data and the protection of privacy in the electronic communications sector and deals with the regulation of a number of important issues such as confidentiality of information, treatment of traffic data, spam and cookies.

Article 5 Confidentiality of the communications

1. Member States shall ensure the confidentiality of communications and the related traffic data by means of a public communications network and publicly available electronic communications services, through national legislation. In particular, they shall prohibit listening, tapping, storage or other kinds of interception or surveillance of communications and the related traffic data by persons other than users, without the consent of the users concerned, except when legally authorised to do so in accordance with Article 15(1). This paragraph shall not prevent technical storage which is necessary for the conveyance of a communication without prejudice to the principle of confidentiality.

2. Paragraph 1 shall not affect any legally authorised recording of communications and the related traffic data when carried out in the course of lawful business practice for the purpose of providing evidence of a commercial transaction or of any other business communication.

3. Member States shall ensure that the use of electronic communications networks to store information or to gain access to information stored in the terminal equipment of a subscriber or user is only allowed on condition that the subscriber or user concerned is provided with clear and comprehensive information in accordance with Directive 95/46/EC, inter alia about the purposes of the processing, and is offered the right to refuse such processing by the data controller. This shall not prevent any technical storage or access for the sole purpose of carrying out or facilitating the transmission of a communication over an electronic communications network, or as strictly necessary in order to provide an information society service explicitly requested by the subscriber or user.

- **Directive 2002/22/EC of the European Parliament and of the Council** Amending Directive on universal service and users' rights relating to electronic communications networks, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sectors and Regulation (EC) No 2006/2004 on consumer protection cooperation.

- **Directive 2009/136/EC (Cookie Directive)**

This Directive amended Directive 2002/58/EC, requiring end user consent to the storing of cookies on their computer.

Cookies are hidden information exchanged between an Internet user and a web server stored in a file on the user's hard disc. They can be used to monitor Internet activities of the user.

The Directive states that the measures referred to in paragraph 1 Article 4 of the Directive 2002/58/EC shall at least:

“- ensure that personal data can be accessed only by authorised personnel for legally authorised purposes,

- protect personal data stored or transmitted against accidental or unlawful destruction, accidental loss or alteration, and unauthorised or unlawful storage, processing, access or disclosure, and,

- ensure the implementation of a security policy with respect to the processing of personal data”

3.2 Accessibility and “easy-to-use” principle

Considering the general rights of people to access the information and to participate in decisions about the environment, it is very important that all people have equal access to the tools that enable use of those rights. There are three major cause of discrimination: digital divide, e-Literacy and disability (Almarabeh and AbuAli, 2010).

Digital divide is the gap between people who have access to the Internet and those who do not.

E-Literacy means level of knowledge and computer skills that enables people to use e-Government services. Lack of computer literacy is serious obstacle for people's participation in e-Government and cause of inequality.

Any kind of disability must not prevent people to use an e-Government service as it is aimed to serve all people irrespective of their physical capabilities.

The EU legislature related to the issue is the following:

- **Charter of Fundamental rights of the EU (Article 21- non discrimination)**

“Any discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited.”

- **Digital Agenda for Europe COM(2010)245 final**

- It is essential to educate European citizens to use ICT and digital media and particularly to attract youngsters to ICT education

- There is also need for concerted actions to make sure that new electronic content is also fully available to persons with disabilities. In particular, public websites and online services in the EU that are important to take a full part in public life should be brought in line with international web accessibility standards [Web Content Accessibility Guidelines (WCAG) 2.0.]. Moreover, the UN Convention on the Rights of persons with disabilities contains obligations concerning accessibility².

3.3 Defamation and insulting

As citizens and interested groups can participate in the environmental permitting process occurrence of defamation and insulting is possible. It could be especially significant problem when web based ICT is used for public participation as the influence of the messages are highly increased. However, defamation banning principle allowing censorship could often be opposed to that of freedom of expression.

European Convention of Human Rights addresses the issue. Article 10 of the Convention allows restrictions of the freedom of expression right for protection of the reputation or the rights of others.

² www.un.org/disabilities/convention/conventionfull.shtml

In many European countries defamation is recognized as a crime within the legislature. Overview of the national legislation concerning defamation in European countries can be found on the website of the Council of Europe.

3.4 Data security

Data should be secure from viruses, hacker attacks, forgery etc. Security means protection of information and information systems by ensuring confidentiality, availability, integrity, authentication, and non-repudiation³.

- In the case of eEnviPer, there is no confidentiality required as the environmental permitting is subject to general principal of transparency applied to environmental issues.
- Availability-data/information have to be available, only authorized persons can remove it, in accordance to law
- Integrity-only authorized persons can modify the data/information, in accordance to law
- Authentication must be preserved (data/information must be authentic)
- Non-repudiation – no-one that participated in the process must not be able to make repudiation with regards to the provided data/information

- **Directive 2002/58/EC (e-Privacy Directive):**

Article 4. Security

1. The provider of a publicly available electronic communications service must take appropriate technical and organizational measures to safeguard security of its services, if necessary in conjunction with the provider of the public communications network with respect to network security. Having regard to the state of the art and the cost of their implementation, these measures shall ensure a level of security appropriate to the risk presented.

2. In case of a particular risk of a breach of the security of the network, the provider of a publicly available electronic communications service must inform the subscribers concerning such risk and, where the risk lies outside the scope of the measures to be taken by the service provider, of any possible remedies, including an indication of the likely costs involved.

Council Framework Decision ([2005/222/JHA](#)) addresses the most significant forms of criminal activity against information systems, such as hacking, viruses and denial of service attacks. The Framework Decision seeks to approximate criminal law across the EU to ensure that Europe's law enforcement and judicial authorities can take action

³ http://www.dol.gov/sec/e_government_plan/p23_security_privacy.htm

against this form of crime. At the moment, there is a proposal for a Directive on attacks against information systems, repealing Framework Decision 2005/222/JHA

3.5 Intellectual Property Rights (IPR)

There are scenarios when various IPRs (copyrights, database rights, patents etc.) are applied to data/information contained within EIA reports. To protect the rights, different limitations on the use and management of the information has to be applied. The two most often scenarios are:

- Environmental consultants working on EIA studies can apply intellectual property rights to the data/information they produced
- Investor may want to protect confidential industrial information or a patent included in an EIA

Number of EU Directives address IPRs. **Directive 2001/29/EC** on the harmonisation of certain aspects of copyright and related rights in the information society (Copyright Directive) regulates exclusive rights granted to under copyright and related rights. It also provides the list of exceptions from the rights. **Directive 2004/48/EC** on the enforcement of intellectual property rights obliges the Member States to “provide for the measures, procedures and remedies necessary to ensure the enforcement of the intellectual property rights including industrial property rights”. **Directive 96/9/EC** on the legal protection of databases (Database Directive) protects the databases that are authors’ own intellectual creations by copyright and other databases by *sui generis* right if “there has been qualitatively and/or quantitatively a substantial investment in either the obtaining, verification or presentation of the contents to prevent extraction and/or re-utilization of the whole or of a substantial part, evaluated qualitatively and/or quantitatively, of the contents of that database”.

According to Aarhus convention, if EIA documentation contains confidential information (e.g. certain information on commercial and industrial aspects or intellectual property rights), disclosure of the information is not mandatory:

Article 4.4

“A request for environmental information may be refused if the disclosure would adversely affect:

(d) The confidentiality of commercial or industrial information where such confidentiality is provided for by national or Community law to protect a legitimate economic interest, including the public interest in maintaining statistical confidentiality and tax secrecy

(e) Intellectual property rights;

The aforementioned grounds for refusal shall be interpreted in a restrictive way, taking into account the public interest served by disclosure and taking into account whether the information requested relates to emissions into the environment.”

The exceptions from access to environmental information are also included in the 2003/4/ES Directive on public access to environmental information.

IPR are also protected by the EIA Directive 85/337/EEC (amended by 97/11/EC, 2003/35/EC, 2009/31/EC):

“Article 10.

The provisions of this Directive shall not affect the obligation on the competent authorities to respect the limitations imposed by national regulations and administrative provisions and accepted legal practices with regard to commercial and industrial confidentiality, including intellectual property, and the safeguarding of the public interest.”

4 Provision of GIS tools

Provision of relevant, accurate and up-to-date spatial data/information and the tools to measure, query and analyse them bring significant benefits to all stakeholders involved in environmental permitting process. Problems related to these actions could seriously compromise the quality of the stakeholders' actions and decisions.

“Community participation is an important component of EIA and yet communities experience difficulties in understanding the complex interplay of social, economic, physical, cultural, ecological analysis and in contributing to the expertised formal procedures of the EIA process. This technical dominance can lead to the unintended outcome that community participants feel confused, excluded, and disempowered. However, recent developments in GIS and GVIS, along with the conceptual framework provided by PGIS, provides both a process and a series of techniques by which participants may contribute more meaningfully to an EIA and by which the results of an EIA can be made more understandable and communicated to a broader community audience.”⁴

In a survey carried out by Craglia et al (2010)⁵ it is discovered that 73% of the organizations involved in the EIA processes in the EU stated that use spatial data provided by Local authorities/local governments and Environmental protection agencies, 52% of them use data produced by Mapping agencies and even 44% produce their own data for EIA reports, spending from less than 5% of the total cost of the reports to more than 30% for the relevant spatial data. Increase in cost caused by problems connected with the use of spatial data was assessed about 15%, while increase in time was between 10% and 20%.

⁴ Alagan, R., 2007, Participatory GIS Approaches to Environmental Impact Assessment: A Case study of the Appalachian Corridor H Transportation Project, PhD dissertation, College of Arts and Sciences at West Virginia University

⁵ Craglia, M., Pavanello, L., and Smith, R.S., 2010, The Use of Spatial Data for the Preparation of Environmental Reports in Europe, Joint Research Centre

5 Involvement of human subjects in the testing

eEnviPer single multi-purpose cloud platform will be tested during the pilot project. The testing will involve human subjects representing the stakeholders in environmental permitting process. The main ethical issues that can rise as a result, can be formulated in the following questions:

- Will the people involved in the testing be exposed to any harm?
- Will the people involved in the testing represent all the social groups that will use the service?

According to Frankel and Siang (1999), “ethical and legal framework for protecting human subjects rests on the principles of autonomy, beneficence, and justice. The first principle, autonomy, requires that subjects be treated with respect as autonomous agents and affirms that those persons with diminished autonomy are entitled to special protection. In practice, this principle is reflected in the process of informed consent, in which the risks and benefits of the research are disclosed to the subject. The second principle, beneficence, involves maximizing possible benefits and good for the subject, while minimizing the amount of possible harm and risks resulting from the research. Since the fruits of knowledge can come at a cost to those participating in research, the last principle, justice, seeks a fair distribution of the burdens and benefits associated with research, so that certain individuals or groups do not bear disproportionate risks while others reap the benefits.”

ICT research may cause harms related to: systems assurance (confidentiality, availability, integrity); individual and organizational privacy; reputation, emotional well-being, or financial sensitivities; and infringement of legal rights (derived from constitution, contract, regulation, or common law) (The Menlo Report).

During the eEnviPer pilot phase, in each pilot location representatives of different user groups will be involved in the testing of different segments of the solution according to their interest. The feedback from the users will be collected, processed and analyzed. In order to respect the above mentioned principles, the eEnviPer partners should:

- inform potential research subject on the research protocol, risks they could face (if there are any identified) and research benefits
- obtain consent from research subjects
- inform research subjects that they can withdraw from research at any time without suffering negative consequences
- ensure anonymous participation of research subjects
- ensure that the business of the applicant will not suffer if the testing of eEnviPer solution is performed on its case
- provide necessary help and support to the interested research subjects

- **Decision No 1982/2006/EC** of the European parliament and of the Council brings general outlines of the ethical framework to be applied in the FP7 research:

“(30) Research activities supported by the Seventh Framework Programme should respect fundamental ethical principles, including those reflected in the Charter of Fundamental Rights of the European Union. The opinions of the European Group on Ethics in Science and New Technologies are and will be taken into account. Research activities should also take into account the Protocol on the Protection and Welfare of Animals and reduce the use of animals in research and testing, with a view ultimately to replacing animal use.”

“Article 6

Ethical principles

1. All the research activities carried out under the Seventh Framework Programme shall be carried out in compliance with fundamental ethical principles.”

6 Exploitation of eEnviPer

- Consortium Agreement establishes the framework for business deployment and defines the IPR's of each partner

The general principle is recognition of each partner retaining the intellectual property of their own contributions.

The IPR of any joint modifications, improvements and perfections will be collectively held by the participant organisations that have generated them.

- Service Level Agreement (SLA) –defines relations between service provider and customers

In order to manage customer's expectations, SLA should address wide range of issues: service to be delivered, performance, problem management, customer's and provider's responsibilities, resolution of disputes, IPR, security etc. It also establishes service performance metrics (e.g. Average Speed to Answer-ASA, Turn-Around Time-TAT etc.).

7 Pilot specific ethical and legal issues

This section is aiming to identify ethical and legal issues that can arise during the deployment of eEnviPer in both pilot and post-project exploitation scenarios in each partner country and at the EU level. Each pilot has defined so far the use cases that eEnviPer will support and that will be tested. The use cases in general consist of transactions between different stakeholders involved in the environmental permitting process (G2B, G2C, B2G, C2G, ...) which imply transfer/exchange of data/information. Any action that takes place in such e-Government service environment could potentially raise an ethical issue.

Within the subsections, each pilot identified the ethical issues and the legal framework eEnviPer should be placed within. The guidelines was “Four ethical issues of the Information Age” concept⁶ which include: Privacy (data protection, expectations of privacy), Accuracy (accuracy of information), Property (intellectual property rights including copyright and database rights) and Accessibility (to the services, to information). The ethical implications reach into broader areas of trust (to information; to information systems; to people...) and social justice (social inequity, e.g. because some people do not have access to the Internet; reduced social interaction...), which are important ethical aspects of e-Government⁷.

The issues are classified according to the framework that identifies four categories of ethical issues in electronic environment⁸:

1. those related to electronic environment (the moral issue of an action is not dependent on the electronic environment, it would arise in the same way offline- e.g. fraud);
2. those dependent on electronic environments (moral issue arises only because the transaction is conducted electronically, but it doesn't have to arise - e.g. viruses, hacking, spamming..);
3. those determined by electronic environments (moral problems where the fact that transactions are conducted electronically is sufficient for particular ethical issues to arise e.g. equality of access to e-Government services);
4. those specific to electronic environments (electronic nature of the transaction is both necessary and sufficient for the ethical issue to arise).

⁶ Mason, R.O., 1986, Four Ethical Issues of the Information Age, MIS Quarterly, Vol.10 No.1,pp.5-12

⁷ Mullen, H., Horner, D.S., 2004, Ethical problems for e-Government: An Evaluative Framework, Electronic Journal of e-Government

⁸ Mullen, H., Horner, D.S., 2004, Ethical problems for e-Government: An Evaluative Framework, Electronic Journal of e-Government

7.1 Greek pilot

7.1.1 General ethical and legal framework

The ethical and legal issues presented in the following table may arise in case of failure to meet the conditions and prerequisites determined and the terms set by the Greek legislation concerning either the administrative processes in general or the environmental permitting process and the e-government services. All these conditions, prerequisites and terms have been taken into account and respectively integrated in the design and all operational specifications of the Greek use cases.

Transaction, stakeholders involved, data/information exchange	Ethical and legal issue	Classify the issue according to Mullen and Horner (2004):	National and/or EU legislation addressing/regulating the issue - if exist
E-government services in general: regulation of the use of IT and communication technologies by the public sector's entities for their competences and for the communication between public sector's entities and between them and individuals and legal persons.	<ol style="list-style-type: none"> 1. Security of IT systems. 2. Security of IT and communication (technological infrastructure). 3. Security of information and data. 4. Processing of personal data / Personal data protection. 5. Accessibility rights. 6. E-signature: validation of e-documents. 	2, 3, 4	<p>Greek Law 3979/2011 concerning e-Government.</p> <p>Greek Law 2472/1997 concerning the protection of personal data.</p>
Processing environmental authorization's requests and Environmental Impact Assessments (EIA) submitted. Stakeholders involved: Environmental Authority, owner of the project or activity, other competent Authorities.	<ol style="list-style-type: none"> 1. Complex processes due to documents needed for the evaluation of the EIA: the owner of the project or activity should submit relative requests to one or more other competent Authorities. 2. Delays due to above-mentioned situation no. 1 may cause violation of the deadlines. 	1	<p>Greek Law 3242/2004 and Greek Law 3448/2006:</p> <p>Self-imposed search of documents by the public authorities, use of information of the public sector: Direct communication among competent Authorities for issuing Certain types of documents which might be needed for environmental authorization and environmental control should be requested by</p>

Transaction, stakeholders involved, data/information exchange	Ethical and legal issue	Classify the issue according to Mullen and Horner (2004):	National and/or EU legislation addressing/regulating the issue - if exist
			the Environmental Authority through direct communication with other competent Authorities.
Following the “Code of administrative procedures” Stakeholder involved: Environmental Authority	Infringement of the “Code of administrative procedures” may cause unequal treatment of citizens’ requests, complexity of processes, delays and violation of deadlines, substantial errors in the outcome of the process, loss of clarity and failure to inform the public.	1	Greek Law 2690/1999: Environmental permitting processes should follow the general codes of administrative procedures (e.g. self-imposed response to a citizen’s or authority’s request, deadlines etc).
Free disposal of spatial data of the Public Administration to all citizens of Greece. Stakeholders involved: Authorities, owners of projects and activities, scientists who carry out EIAs and citizens.	Restricted access to spatial data may cause: 1. Higher costs for carrying out EIAs. 2. Repetition of studies and research in order to compile spatial data sets already possessed by other Authorities and Organizations. 3. Failure to gather and examine all the accurate spatial data needed to corroborate the establishment of a project or activity in a certain site.	1	Greek Law 3882/2010 and EU Directive 2007/2/EU (INSPIRE Directive) There should be open access to spatial data provided by our system.

7.1.2 Issues related to use cases

Use case 1: Environmental permitting of projects and activities of category B for which Standard Environmental Commitments are not determined by the legislation

Use case 2: Renewal of Environmental Approval of projects and activities of category B for which Standard Environmental Commitments are not determined by the legislation

Use case 3: Amendment of Environmental Approval of projects and activities of category B for which Standard Environmental Commitments are not determined by the legislation

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National and/or EU legislation addressing/regulating the issue - if exist
<p><u>Use case 1: Environmental Permitting:</u></p> <p>The owner of the project should submit an EIA consisting of an Environmental Report (ER), maps, designs and other documents, in case they are required.</p> <p><u>Use cases 2 and 3:</u></p> <p>In case of renewal or amendment of the environmental approval, the owner of the project should submit a report about the present operation of the project, the measures taken to protect the environment and their effectiveness, in case of amendment: the changes planned and there environmental impact. Any necessary designs and documents should be submitted together.</p>	<p><u>Use cases 1, 2 and 3: Environmental Permitting:</u></p> <ol style="list-style-type: none"> 1. Complex processes due to documents needed for the evaluation of the ER: the owner of the project or activity should submit relative requests to one or more other competent Authorities. 2. Delays due to above-mentioned situation no. 1 may cause violation of the deadlines. 3. For projects or activities in NATURA 2000 areas: lack of a “Special Ecological Evaluation” from the EIA file would cause the contemporary interruption of the environmental permitting process. The “Special Ecological Evaluation” should be submitted by the owner of the project or activity, so that the process continues. 	<p>1</p>	<p>Greek Law 4014/2011 for Environmental permitting process.</p> <p>A “Special Ecological Evaluation” is required for projects and activities located in NATURA 2000 areas.</p>
<p>The Environmental Authority issues the Environmental Approval or renewal or amendment of environmental terms</p>	<p>1. The outcome of the environmental permitting process is not announced or published:</p> <ol style="list-style-type: none"> 1a) Citizens and other stakeholders are not informed about projects and activities planned. 1b) Citizens and other 	<p>3, 1</p>	<p>a) Common Ministerial Decision No. 77921/1440/1995 on the free access of the public to Authorities concerning environmental information.</p> <p>b) Greek Law 3861/2010</p>

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National and/or EU legislation addressing/regulating the issue - if exist
	<p>stakeholders are prevented from exercising their right to appeal against the decision for approval / amendment / renewal of environmental terms, within a deadline, invoking the appropriate documentation or arguments.</p> <p>2. The outcome of the environmental permitting process is published, but only on the CL@RITY website.</p> <p>2a) Unequal information of the public: people who have to access to the internet are not informed.</p> <p>2b) As in the above-mentioned situation 1b.</p>		<p>for administrative decisions' publication on the CL@RITY website.</p> <p>There should be open and equal access for all citizens to the outcome of the Environmental Permitting Process, renewal or amendment of the Decision of the Environmental Approval:</p> <ul style="list-style-type: none"> - Publication on the CL@RITY website. - Publication of announcement about the outcome of the Environmental Permitting Process in local newspapers. <p>c) Greek Law 3852/2010, Articles 227 and 238.</p> <p>All citizens have the right to appeal against decisions of the Public Administration within a deadline, invoking the appropriate documentation or arguments.</p>

Use case 4: Determination of Standard Environmental Commitments for projects and activities of category B

Use case 5: Amendment of Standard Environmental Commitments for projects and activities of category B

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National and/or EU legislation addressing/regulating the issue - if exist
The Authority which provides the	<p>1) Violation of deadlines.</p> <p>2) For projects or activities in</p>		Greek Law 4014/2011 for Environmental

<p>establishment or the operation license is competent for the determination of the Standard Environmental Commitments (SEC).</p> <p>The owner of the project of activity should submit a declaration of the SEC.</p>	<p>NATURA 2000 areas: lack of a “Special Ecological Evaluation”, would cause the contemporary interruption of the environmental permitting process. The “Special Ecological Evaluation” should be submitted by the owner of the project or activity to the Directorate of Environment and Spatial Planning, so that the process continues.</p>	<p>1</p>	<p>permitting process.</p> <p>A “Special Ecological Evaluation” is required for projects and activities located in NATURA 2000 areas.</p>
<p>In case of projects and activities in a NATURA 2000 area: The Directorate of Environment and Spatial Planning of the Region should evaluate the “Special Ecological Evaluation” and issue a decision on the additional commitments for the protection of the NATURA 2000 area.</p>	<p>1. The outcome of processing the “Special Ecological Evaluation” is not announced or published:</p> <p>1a) Citizens and other stakeholders are not informed about projects and activities planned in protected areas of the NATURA 2000 Network.</p> <p>1b) Citizens and other stakeholders are prevented from exercising their right to appeal against the decision for the approval of the “Special Ecological Evaluation”, within a deadline, invoking the appropriate documentation or arguments.</p> <p>2. The outcome of processing the “Special Ecological Evaluation” is published, but only on the CL@RITY website.</p> <p>2a) Unequal information of the public: people who have to access to the internet are not informed.</p> <p>2b) As in the above-mentioned situation 1b.</p>	<p>3, 1</p>	<p>a) Common Ministerial Decision No. 77921/1440/1995 on the free access of the public to Authorities concerning environmental information.</p> <p>b) Greek Law 3861/2010 for administrative decisions’ publication on the CL@RITY website.</p> <p>There should be open and equal access for all citizens to the outcome of the Environmental Permitting Process, renewal or amendment of the Decision of the Environmental Approval:</p> <ul style="list-style-type: none"> - Publication on the CL@RITY website. - Publication of announcement about the outcome of the Environmental Permitting Process in local newspapers. <p>c) Greek Law 3852/2010, Articles 227 and 238.</p> <p>All citizens have the right to appeal against decisions of the Public</p>

			Administration within a deadline, invoking the appropriate documentation or arguments.
The SEC (and additional SEC in case of project located in NATURA 2000 area) are included in the establishment or the operation license of the project or activity.	<p>1. Violation of deadlines.</p> <p>2. The SEC approved, as a part of the establishment or the operation license, are not announced or published:</p> <p>2a) Citizens and other stakeholders are not informed about projects and activities planned.</p> <p>2b) Citizens and other stakeholders are prevented from exercising their right to appeal against the SEC approved as a part of the establishment or the operation license, within a deadline, invoking the appropriate documentation or arguments.</p> <p>3. The outcome of the environmental permitting process is published, but only on the CL@RITY website.</p> <p>3a) Unequal information of the public: people who have to access to the internet are not informed.</p> <p>3b) As in the above-mentioned situation 2b.</p>	3, 1	<p>a) Greek Law 4014/2011 for Environmental Permitting process</p> <p>b) Common Ministerial Decision No. 77921/1440/1995 on the free access of the public to Authorities concerning environmental information.</p> <p>c) Greek Law 3861/2010 for administrative decisions' publication on the CL@RITY website.</p> <p>There should be open and equal access for all citizens to the outcome of the Environmental Permitting Process, renewal or amendment of the Decision of the Environmental Approval:</p> <ul style="list-style-type: none"> - Publication on the CL@RITY website. - Publication of announcement about the outcome of the Environmental Permitting Process in local newspapers. <p>d) Greek Law 3852/2010, Articles 227 and 238.</p> <p>All citizens have the right to appeal against decisions of the Public Administration within a deadline, invoking the appropriate documentation or arguments.</p>

Use case 6: Consultation phase for projects and activities of subcategories A1 and A2

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National and/or EU legislation addressing/regulating the issue - if exist
<p>Consultation phase: Publicizing EIAs, information and data on projects and activities, so that the citizens, Non-Governmental Organizations and other stakeholders have access and may express their opinion.</p>	<p>1. The announcement for the consultation phase is published either only on the official website of the Environmental Authority or in a local newspaper of restricted circulation: unequal access by the public.</p> <p>2. During publication of the EIA file by the Environmental Authority: Failure to protect personal data, commercial confidentiality, inventions and industrial design, intellectual property.</p> <p>3. Some people access the EIA available on the system, not to express their opinion, but to add insulting, offensive or derogatory comments, covered under anonymity or fake names.</p> <p>4. Violation of the consultation phase's deadline.</p>	<p>1, 2, 3, 4</p>	<p>a) Greek Law 2472/1997 for the protection of personal data.</p> <p>b) Greek Law 146/1914 concerning the commercial confidentiality.</p> <p>c) Greek Law 1733/1987 concerning the protection of inventions and industrial design.</p> <p>d) Common Ministerial Decision 77921/1440/1995 concerning the access to environmental information.</p> <p>During consultation phase, personal data, commercial confidentiality, inventions and industrial design, as well as intellectual property should be protected.</p> <p>The system should not allow the addition of anonymous, insulting, offensive or derogatory comments.</p>

Issues related to all use cases:

i. Environmental controls

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National and/or EU legislation addressing/regulating the issue - if exist
<p>Environmental controls may be conducted during the environmental permitting process, regularly or irregularly after the environmental approval or after a complaint or assertion.</p> <p>Stakeholders involved: Environmental Authority, occasionally other competent Authorities, owner of the project or activity, citizens, NGOs.</p>	<p>1. The owner of the project or activity does not allow the Authorities conduct the control.</p> <p>2. Failure to conduct an objective control, e.g. due to lack of sufficient data and information, failure to get unbiased specimens, etc.</p> <p>3. The Authorities do not follow the procedures determined by the legislation, e.g. no “Environmental Control Report” written <i>in situ</i>, i.e. during the site visit.</p> <p>4. Violation of the environmental conditions or lack of Environmental approval or other violation of the environmental legislation: administrative or penal sanctions should be imposed by the Environmental Authority.</p>	1	<p>Greek Law 4014/2011 for Environmental Permitting process, Articles 20, 21.</p> <p>Greek Law 4042/2012, Article 55.</p> <p>Greek Law 1650/1986 for the protection of the environment.</p>

ii. Cancelling a request

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National and/or EU legislation addressing/regulating the issue - if exist
<p>Applicant cancels the request for environmental authorization</p>	<p>Lack of system’s security could allow access of unauthorized persons, who cancel the application.</p>	2	<p>Greek Law 3979/2011 concerning e-Government</p>

7.1.3 Issues related to pilot phase

Ethical issue and the action that can trigger the issue	Classify the issue according to Mullen and Horner (2004)	National and/or EU legislation addressing/regulating the issue - if exist
<p>Ineffective dissemination strategy, unequal distribution of information:</p> <p>A not carefully organized dissemination strategy, would fail to inform all stakeholders. As a result, many of them will not be able to participate in the pilot implementation of the project.</p>	<p>1, 3</p>	<p>a) Constitution of Greece, Article 24.</p> <p>b) Common Ministerial Decision 77921/1440/1995 concerning the access to environmental information.</p>

7.1.4 Issues related to post-pilot exploitation scenario

Ethical issue and the action that can trigger the issue	Classify the issue according to Mullen and Horner (2004)	National and/or EU legislation addressing/regulating the issue - if exist
<p>Users reject the system's use, because they find that:</p> <ul style="list-style-type: none"> - is complicated and user unfriendly. - is ineffective, because it fails to shorten the time and effort needed to follow and integrate the environmental permitting processes. - is insecure, failing to protect personal data, investment innovations etc. 	<p>3</p>	<p>Greek Law 3979/2011 concerning e-Government.</p> <p>Greek Law 2472/1997 concerning the protection of personal data.</p> <p>Greek Law 2690/1999: Environmental permitting processes should follow the general codes of administrative procedures (e.g. self-imposed response to a citizen's or authority's request, deadlines etc).</p> <p>Greek Law 4014/2011 for Environmental permitting process.</p>

7.1.5 National legal framework

Environmental authorization is an administrative process, determined by the dual set of rules and conditions determined by:

- The legislation concerning the administrative processes in general.
- The legislation for the protection of the environment.

This twofold set of legal rules is reinforced by the **recent legislation on e-Government services**, in case of environmental permitting processes followed through such systems of e-services.

The administrative processes' rules in general are determined by the following Greek laws:

- 2690/1999 (Governmental Gazette Vol. A/45/09.03.1999). "Ratification of the Administrative Process Code and other issues".
- 3242/2004 (Governmental Gazette Vol. A/102/ 24.05.2004) "Regulations of the organization and operation of the Government, the administrative procedure and the Local Public Authorities".
- 1599/1986 (Governmental Gazette Vol. A / 75 / 11.06.1986), Article 16, "On the relation between the State and the citizens".
- 1943/1991 (Governmental Gazette Vol. A/ 50 /11.4.1991). "Modernization of the organization and operation of the Public Administration, upgrading of the personnel, and other relative issues".

In addition, during all administrative process, personal data, intellectual property, as well as technological inventions should be protected according to the following Greek Laws:

- 146/1914 (Governmental Gazette Vol. B / 16.12.1913 – 27.01.1914). "On unfair competition".
- 1733/1987 (Governmental Gazette Vol. A/171/ 18-22.04.1987). "Transfer of Technology, inventions, technological innovation and recommendation of the Committee for Nuclear Energy".
- 2121/1993 (Governmental Gazette Vol. A/25/ 04.03.1993). "Intellectual property, relative rights and cultural issues".
- 2472/1997 (Governmental Gazette Vol. A/50/10.04.1997). "Protection of the individual against processing of personal data".
- 3448/2006 (Governmental Gazette Vol. A/57/15.03.2006) "On the further use of information of the public sector and regulation of issues of the Ministry of Interior, Public Administration and Decentralization".

The environmental permitting process to be followed is determined by the categorization of the project or activity according to its environmental impact (subcategories A1 and A2, category B). All processes are described by the Greek Law 4014/2011 (Governmental Gazette Vol. A/209/ 21.09.2011) "Environmental permitting of projects and activities, regulation of arbitrary structures in coordination with the development of environmental balance and other issues of the Ministry of Environment".

Planning the establishment of a project or activity in a certain location, requires the examination of a series of **spatial data**, which should be included in the Environmental Impact Assessment and should also be evaluated by the Environmental Authority. There should be open access to spatial data, according to:

- The Directive 2007/2/EU of the European Council and the Council of 14th March 2000, "Establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). (Official Journal L 108, 25/04/2007 P. 0001 – 0014).

- The Greek Law 3882/2010 (Governmental Gazette Vol. A/ 166 /22.09.2010) “National Infrastructure for Spatial Information – Harmonization with the Directive 2007/2/EU of the European Council and the Council of 14th March 2000, and other issues. Amendment of the Law 1674/1986 “Organization for the Property Register and Mapping of Greece and other issues”, (Governmental Gazette Vol. A/141)”.⁹

Environmental permitting processes should ensure that the public is informed and participates in it, according to the Greek Law 4014/2012 and the Common Ministerial Decision No. 77921/1440/1995 (Governmental Gazette Vol. B/795 /14.09.1995) on “Free access of the public to Authorities concerning environmental information”. This legal right of the public is also protected by the terms set by the Common Ministerial Decision No. 9269/470/2007 (Governmental Gazette Vol. B / 286/ 02.03.2007) “Means of judicial protection of the public against actions or omissions of the Administration concerning issues of informing the public and the participation of people in the environmental permitting procedure, according to the articles 4 and 5 of the Law 1650/1986, as they were amended by the articles 2 and 3 of the Law 3010/2002 (B’ 1391) and in compliance with the orders of the articles 3 (paragraph 7) and 4 (paragraph 4) of the Directive 2003/35/EU”.

Information of the public should also be ensured after the integration of the environmental permitting processes, through the publication of the Environmental Authority’s decision (outcome of the process), according to the Greek Law 3861/2010 (Governmental Gazette Vol. A/ 112 / 13.10.2010), “Clarity improvement through the obligatory online publishing of laws and documents issued by governmental, administrative and local administrative authorities on the web, ‘CL@RITY Project’ and other issues”. All citizens have the right to appeal against decisions for environmental approvals (as against any other decision of the Public Administration) within a deadline, invoking the appropriate documentation or arguments, according to the Greek Law 3852/2010 (Governmental Gazette Vol. A / 87 / 07.06.2010), Articles 227 and 238, on the “New architecture of the Self-Government and the Decentralized Administration – the “Kallikratis” Project”.

Violation of environmental terms is ascertained by the Environmental Authority through the environmental controls. The Greek Law 4042/2012 (Governmental Gazette Vol. A/ 24 /13.02.2012) determines the penal protection of the environment (in compliance with the Directive 2008/99/EU – Frame of production and management of waste - Compliance with the Directive 2008/98/EU – Regulation of issues of the Ministry of Environment, Energy and Climate Change).

All above-mentioned legal issues covered by the administrative legislation and the legislation for the protection of the environment and the environmental permitting processes have to be taken into account for the development of e-Government systems

⁹ See also: www.geodata.gov.gr, www.okxe.gr and www.inspire.okxe.gr

and tools which would serve to environmental authorization. Security issues and requirements for e-Government systems are covered by the Greek Law 3979/2011 (Governmental Gazette Vol. A/ 138/16.06.2011) “On e-Government and other issues”.

7.2 Italian pilot

7.2.1 Issues related to use cases

Ethical issues common for all the use cases

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
E-government services in general	Accessibility	3	Italian Law, Art. 4, 9 January 2004
Usage of personal data in electronic transaction (uploading documents, submitting forms with personal information etc.)	Protection of personal data, commercial confidentiality, protection of intellectual property	1	Italian Legislative Decree 30 June 2003, 196 Italian Legislative Decree 7 March 2005, n. 82
Public access to sensitive localization data (Publishing important GIS Data of a military zone)	Protection of personal data	1	Italian Legislative Decree 30 June 2003, 196 Italian Legislative Decree 7 March 2005, n. 82
Usage of electronic documents	Legal validity of electronic documents	4	NA
Administrative process, led electronically, affecting the public interest	Transparency of the process including citizens participation is limited or jeopardized in any way	1	Italian Law, 7 June 2000, n. 150 Italian Legislative Decree 7 March 2005, n. 82

EIA_UC01_Applicant_Registration, MAH_UC01_Registration

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Users register to the system	Electronic Identity safeguard and verification don't work properly	2	NA

EIA_UC02_Application

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
The applicant submits the application	Information provided not complete or not compliant	1	Italian Legislative Decree 3 April 2006, Art. 23

EIA_UC07_Application_Publication

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
The Applicant publishes an application brief	Information provided not complete or not compliant, or delay in the publication	1	Italian Legislative Decree 3 April 2006, Art. 24/1

EIA_UC09_Integration_Request

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
The IPPC Commission asks the Applicant to provide additional documentation and the Ministry validates the request	Further verifications may be solicited by private citizens and other stakeholders, and the authority must take them in due consideration and ask the applicant additional documentation but the authority avoids to do that.	1	Italian Legislative Decree 3 April 2006, Art. 26/3

EIA_UC10_WorkspaceAccess

EIA_UC18_IPPCConsultation

EIA_UC17_UpdateAIAMinAmbiente

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Private citizens and other stakeholders access the workspace	The system prevents someone to access the service	2	Italian Legislative Decree 3 April 2006, Art. 24/4 Italian Legislative Decree 3 April 2006, Art. 29

EIA_UC13_AdviceInquiryAccess

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Applicant accesses the assessment results	Decision and the related explanation (or a part of decision) is not visible or not clear	1	Italian Legislative Decree 3 April 2006, Art. 27/1

EIA_UC20_SelfcheckDataUpdate

EIA_IPPC_UC21_InspectionExecution

EIA_UC22_FailureReport

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Either the applicant or the commission access to the system to insert results of their monitoring/inspection activity	Environmental constraints envisaged are not respected	1	Italian Legislative Decree 3 April 2006, Art. 27/2

MAH_UC07_SMS_Implementation

MAH_UC08_AuditPerforming

MAH_UC09_FormalSuspension

MAH_UC10_EIA-IPPC_Suspension

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Environment Agency monitors that plants operation in compliance with safeguard thresholds and the original design	Non compliance with the safety thresholds identified	1	Italian Legislative Decree 17 August 2009, n. 334

7.2.2 Issues related to post-pilot exploitation scenario

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Availability of E-government services and data for private citizens and enterprises	The service is developed and set-up with public money, i.e. money coming from citizens through tax. If the PA asks professionals a fee to use the service that's like asking someone to pay twice for the service.	4	NA

7.2.3 National legal framework

Law on Environmental Impact Assessment (Italian Legislative Decree 3 April 2006, n. 152: on Environmental Regulations) defines Environmental Impact Assessment process including rights and liabilities of the stakeholders involved and penalties if the rules are violated, and details related to the safeguard of the rights of public participation to the administrative proceeding. In addition, Italian Legislative Decree 17 August 2009, n. 334 (Implementation of Directive 96/82/EC) defines further monitoring rules related to the control of major-accident hazards due to dangerous substances management.

The protection of IPR is governed Italy from the Law n. 633, 22nd April 1941, subject then to modifications, the latest introduced by Law n. 248, 18th August 2000.

Protection of personal data is guaranteed by the Italian Legislative Decree 30 June 2003, 196, in compliance with the EU legislature.

The Law n. 547, 23th December 1993, defines the Criminal Code and the Criminal Procedure Code on the subject of cybercrime.

The Law n.150, 7th June 2000, addresses the issue of transparency, acknowledging the right of access of citizens in to administrative institutions and to administrative proceedings, including the use of consultation and active participation action.

A specific law (Legge Stanca, Art. 4, 9 January 2004) has been defined to face the issue of accessibility, intended as the “ability of computer systems, in the manner and to the extent permitted by technological knowledge, to provide services and usable information, without discrimination, even for those who, because of personal disabilities, require assistive technology or special configurations”.

The Italian Legislative Decree 7 March 2005, n. 82, the so called “Public Administration Digital Code” (<http://www.digitpa.gov.it/cad>), faces a set of ethical issues such as:

- the participation to administrative proceedings through information technologies (“Participation in the administrative procedure and the right of access to administrative documents can be exercised through the use of information technology and communication according to the provisions of Articles 59 and 60 of the Presidential Decree of 28 December 2000, n. 445”);
- Communication between companies and public administrations (“The submission of applications, statements, data and the exchange of information and documents, including for statistical purposes, between companies and public administrations, takes place exclusively using information and communication technologies. In the same way the government adopt and communicate acts and administrative measures against companies”)
- Democratic Electronic Participation (“Public administrations encourage any form of use of new technologies to promote greater participation of citizens, even living abroad, in the democratic process and to facilitate the exercise of political and civil rights both individual and collective”)
- Legal validity of electronic documents (“The electronic documents produced by anyone, their electronic storage and transmission by electronic means, done in compliance with the technical rules set out in Article 71, are valid and relevant to the effects of the law ”)
- Digital Signature (“The digital signature integrates and replaces the affixing of seals, punches, stamps, labels and marks of any kind to any order provided by law.”)
- Privacy of data transmitted electronically (“Persons working with electronic transmission of documents, data and documents drawn up by computer can not take cognizance of electronic correspondence, duplicate by any means or transfer to any third parties information about the existence of correspondence, communications or messages transmitted over the Internet and the related content and any part/extract of it, except in the case of information by their nature or by express indication of the sender intended to be made public”)

Several of those points are recalled by the Directive no. 8 26 November 2009 of the Minister for Public Administration and Innovation, which defines the “Guidelines for the Web Sites of Public Administration”.

7.3 Serbian pilot

7.3.1 Issues related to use cases

Use case 1. User entering the system

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
User log in the system	Any kind of security problems	2	<p>Law on information security-draft</p> <p>Regulation on the provision and protection of information systems of state administration (Official gazette of the RS 41/90)</p> <p>Law on organisation and jurisdiction of state bodies for fighting against high-technology criminal (Official gazette of the RS 61/2005)</p> <p>Criminal Law (Official gazette of the RS 85/05, 88/05, 107/05, 72/09, 111/09)</p>

Use case 2. Filling new request

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Applicant fills in the digital form (application)	If the system is not secure (affected by viruses, hacker's attack etc.) it is possible that the form is not generated well	2	See previous security issue
Applicant fills in the digital form (application)	The data provided are not accurate	1	NA
Env. Expert submit EIA study on behalf of the investor	EIA study contains some confidential information (industrial property rights)	1	Law on acknowledgment of the Convention on access to information, public participation in decision-making and

	Env. Expert as the author of EIA study has copyright on certain parts of the report		access to justice in Environmental Matters criminal (Official gazette of the RS 38/2009) Law on free access to information (Official gazette of the RS 120/2007, 104/2009, 36/2010) IPR Laws
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Use case 5. Canceling request

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Applicant cancels the request for permit	If the system is not secure it is possible that someone else (who is not authorized) cancels the application	2	See previous security issue

Use case 6. Using GIS analytic tools

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
User uses GIS portal to retrieve spatial and non-spatial data/information on the environment	GIS portal provide inaccurate or irrelevant data/information on the environment-the user is misinformed. Or the user is denied for relevant information	1	Law on state survey and cadastre (72/09, 18/10)
User uses GIS portal to retrieve spatial and non-spatial data/information on the environment	GIS tools don't work properly-the user is misinformed	2	There is no legislature addressing electronic service quality

Use case 7. Administrating the Permit Issuing case

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Employee at the public authority is administrating a case	Unauthorized person accesses and misuse the system	1,2	According to Instructions for electronic office work (Official gazette of the RS 40/10), only authorized persons can access the system. This is ensured by granted authorization level and the identity is checked by password or electronic certificate.

Use case 7. Notifying the Public

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Public authority sends an information to the public portal	Employee at the public authority doesn't send the information to the public portal (intentionally or accidentally) which affects the extension of the process and potential harm for the investor	1	Law on Environmental Impact Assessment (Official gazette of the RS 135/04, 36/09)

Use case 7. Influence of the Public

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
User inspects the EIA applications on the portal	Accessibility to the service is limited (some citizens don't have access to the Internet, or don't have computer or not familiar with the technology)	3	principle of informing and participation of the public- Law on environmental protection (Official gazette of the RS 135/04, 36/09, 72/09, 43/11) Anti-discrimination law (Official gazette of the RS 22/09)

User leave a comment or a complaint on a EIA application	Comment contains defamation or offensive material	1, 2	Criminal Law (Official gazette of the RS 85/05, 88/05, 107/05, 72/09, 111/09)
User leave a comment or a complaint on a EIA application	Public authority censor any offensive remarks, but where are the limits of censorship and who is controlling it?	1	NA
User leave a comment or a complaint on a EIA application	Employee who is authorized to approach the system misuse personal data of the user (email address, name,...)	1, 2	Law on personal data protection (Official gazette of the RS 97/08, 104/09, 68/12)

7.3.2 Issues related to post-pilot exploitation scenario

Ethical issue and the action that can trigger the issue	Classify the issue according to Mullen and Horner (2004)	National and/or EU legislation addressing/regulating the issue - if exist
eEnviPer service is too complicated for a number of users	3	NA

7.3.3 National legal framework

Law on Environmental Impact Assessment (Official gazette of the RS 135/04, 36/09) defines Environmental Impact Assessment process including rights and liabilities of the stakeholders involved and penalties if the rules are violated.

Protection of personal data is guaranteed by the Constitution of the Republic of Serbia. Law on Personal Data Protection (Official gazette of the RS 97/08, 104/09, 68/12) is highly harmonized with the EU legislature.

The first e-Government related law adopted in Serbia is the Law on Electronic Signature (Official gazette of the RS 135/2004) aimed to electronic documents protection. For electronic data storage it is essential that the data is signed with an electronic signature, which secures appropriate functions, such as authenticity, integrity and legality, in accordance with the legislation.

The Criminal Law (Official gazette of the RS 85/05, 88/05, 107/05, 72/09, 111/09) recognizes as criminal acts which endanger security of computer data. It has introduced seven new criminal acts against the security of computer networks, systems and data- unauthorized use of computers and computer networks, computer sabotage, creation and spread of viruses, disturbing the process and transfer of electronic data, unauthorized access to protected computers or computer networks and protection from unauthorized crossings of limits of public computer networks. The Law also recognises defamation as a crime.

The Law on the Organization and Jurisdiction of State Organs against High-Tech Crime criminal (Official gazette of the RS 61/2005) also regulates protection against computer crime in Serbia. This Law regulates education, organization, jurisdiction and authorities of special organization units of state bodies in order to reveal, prosecute and adjudicate criminal acts identified by this Law.

According to the Law on Free Access to Information of Public Significance (Official gazette of the RS 120/2004), everyone has right to receive information granting the access to a document containing information of public importance, to a copy of that document, or the right to have that document delivered by mail, fax, e-mail, or in any other way. Law on state survey and cadastre (72/09, 18/10) adopted INSPIRE Directive principles and prescribed that spatial data and information on the environment have to be available to everyone as well as the very basic GIS services.

Discrimination (and unfavourable position or an individual or a group of people in particular) is banned by the Anti-discrimination law (Official gazette of the RS 22/09), although digital divide and e-Literacy issues are not specifically addressed.

The set of laws related to Intellectual Property Rights protect copyrights of the environmental consultants for the databases and analysis generated and published within publicly available EIA studies. Confidential business data and information (including patents) are not required to be published in EIA study; nevertheless it is protected by the laws.

7.4 Croatian pilot

7.4.1 Issues related to use cases

Use case 1 - Administrator

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Administration	Accuracy/ Reliability of info	1	EC - Digital Agenda for Europe 2010-2020 ¹⁰ ; Croatian e-government initiative
Administration	Hacking	2	EC - Digital Agenda for Europe 2010-2020; Croatian e-government

¹⁰ EC - Digital Agenda for Europe 2010-2020: 3rd initiative – improvement of trust and security on Internet

			initiative
Administration	Illegal access	2	EC - Digital Agenda for Europe 2010-2020; Croatian e-government initiative
Administration	Errors in administration related to electronic resources due to ignorance or neglect	4	Defined by Internal employer documents that are based on Zakonu o radu (NN111/12) – Labour Law
Administration	Errors in administration related to electronic resources due to malicious activity	2	

Use case 2 -Investor

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Investor/Applicant Any transaction within permitting workflow where applicant needs to submit data	Truthfulness	1	Civil law, Env. Protection Act (NN 110/07) and permitting by-laws
Investor/Applicant Any transaction within permitting workflow where applicant needs to submit data that are classified as business confidential or can be assumed as business confidential.	Property (business related confidential data)	1,2	Zakon o zaštiti tajnosti podataka (NN 108/96) – Data Protection Act
Investor/Applicant	Privacy (personal confidential data)	2	Article 29 of Directive 95/46/EC; Directive 95/46/EC ¹¹ ;

¹¹ Directive 95/46/EC - protection of individuals with regard to the processing of personal data and on the free movement of such data

			Zakon o zaštiti osobnih podataka (NN103/03; 118/06; 41/08) – Privacy Act
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Use case 3 – Environment Ministry

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Environment ministry	Wrongful appropriation, misuse, fraud	1	Internal human resources regulations, regulations that apply for all public servants as defined by the Ministry of Public Administration; Env. Protection Act (NN 110/07) and permitting by-laws ¹²
Environment ministry	Problems related to Quality and Completeness Errare humanum est! That risk exposure is probable. In designing workflow, developers can assist with checklists, cross-checks and similar reminders to reduce the risk.	3	Env. Protection Act (NN 110/07) and permitting by-laws

Use case 4 – IPPC Commission or other authorities involved in permitting process

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
IPPC Commission	Truthfulness	1	Internal employee regulations; Env. Protection Act (NN 110/07) and permitting

¹² By-laws: Regulation on environmental impact assessment (OG No. 64/08, 67/09); Regulation on strategic environmental assessment of plans and programmes (OG No. 64/08); Ordinance on the register of use permits establishing integrated environmental requirements and of decisions on integrated environmental requirements for existing installations (OG No. 113/08); Regulation on the procedure for establishing integrated environmental requirements (OG No. 114/08)

			by-laws
IPPC Commission	Problems related to Quality and Completeness	3	Env. Protection Act (NN 110/07) and permitting by-laws

Use case 5 – Environment Agency (as Use case 4)

Use case 6 – Environmental Consultant

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Env. Consultant	Truthfulness	1	Code of conduct- part of Env. Consultants' certification requirements as defined by Env. Protection Act (NN 110/07) and permitting by-laws ¹³
Env. Consultant	Problems related to Quality and Completeness	3	Code of conduct- part of Env. Consultants' certification requirements Env. Protection Act (NN 110/07) and permitting by-laws

Use case 7 – Public

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Public	Difficult access to information	3	The Charter of Fundamental Rights of the European Union ; Directive 2003/4/EC ¹⁴ ; Zakon o pravu na pristup informacijama (NN 172/03, 144/10, 37/11,

¹³ Ordinance on requirements for issuing approvals to legal persons for performing professional environmental protection activities (OG No. 57/10)

¹⁴ Directive 2003/4/EC – access to env. related info by public

			77/11)- Law on the Right to Access Information
Public	Difficult participation	3	Aarhus convention ¹⁵ ; Directive 2003/35/EC ¹⁶ ; Regulation on information and participation of the public and public concerned in environmental matters (OG No. 64/08) Env. Protection Act (NN 110/07)

7.4.2 Issues related to pilot phase

Ethical issue and the action that can trigger the issue	Classify the issue according to Mullen and Horner (2004)	National and/or EU legislation addressing/regulating the issue - if exist
Property (investor business related confidential data; designer, technology, environmental consultants know-how) used by EnviPer project	1	There is no legal clause in Env. Law and by-laws that gives permission – we are outside permitting process that is well regulated by by-laws; eEnviPer team is bound by Article 15 of the FP7 Rules for Participation (ethical principles); Decision No 1982/2006/EC ¹⁷
Privacy (confidential data about investor, designers, consultants,..involved in test cases) used by eEnviPer project	1	There is no legal clause in Env. Law and by-laws that gives permission – we are outside permitting process that is well regulated by by-laws; eEnviPer

¹⁵ Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus 1998): Published in OG–IT No. 1/07, came into force with respect to the Republic of Croatia on 25 June 2007, and the effective date was published in OG-IT No. 7/08

¹⁶ Directive 2003/35/EC – public participation in env. related processes

¹⁷ Decision No 1982/2006/EC - Article 6 Ethical principles within the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013)

		team is bound by Article 15 of the FP7 Rules for Participation (ethical principles); Decision No 1982/2006/EC
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7.4.3 National legal framework

The environmental permitting process is regulated by the Environmental Protection Act (OG No. 110/07) and Regulation on environmental impact assessment and strategic environmental assessment of plans and programmes (OG No. 64/08, 67/09). In addition, IPPC Directive is transposed in Ordinance on the register of use permits establishing integrated environmental requirements and of decisions on integrated environmental requirements for existing installations (OG No. 113/08), Ordinance on the register of installations in which dangerous substances have been identified and on the register of reported major accidents (OG No. 113/08) and the Regulation on the procedure for establishing integrated environmental requirements (OG No. 114/08). Nature protection as part of permitting process is regulated by the Nature Protection Act (OG 70/05, 139/08 and 57/11).

Protection of personal data is guaranteed by the Constitution (Article 37 of the Constitution of the Republic of Croatia). The Act on personal data protection has been passed on the basis of the constitutional provision on the right to personal data protection (Official Gazette N° 103/03, 118/06, 41/08). Next to the Act on personal data protection there are other legal acts regulating the personal data protection domain:

- Regulation on the manner of keeping the records of personal data filing systems and the pertinent records form (Official Gazette N° 105/04) and
- Regulation on the procedure for storage and special measures relating to the technical protection of special categories of personal data (Official Gazette N° 139/04).

The Act on personal data protection as a basic law in the field of personal data protection in the Republic of Croatia has also been harmonised in all relevant provisions with the Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

e-Government Legislation: There is no specific eGovernment legislation in Croatia; however, there is a comprehensive framework of laws and regulations in place for exercising eGovernance which is supplemented by the Electronic Document Act (OG 150/2005), the Information Security and Confidentiality Act (NN 79/2007), the Act on the Right to Access Information (NN 172/03) and the implementation of the Convention on Cybercrime (OG 173/2003).

eSignatures Legislation: Electronic Signature Act (NN 10/02 / NN 80/08): Croatia was one of the first countries to include digital signatures in its legislation. The Electronic Signature Act has been supplemented by a series of ordinances and regulations, such as the Regulation on the scope of operations, content and responsible authority for

operations of electronic signature certification for State Administration bodies (OG 146/04).

The Law on State Survey and Real Property Cadastre (Official Gazette 16/07) contains a separate chapter on SDI, that was attuned to some of the provisions of the directive. However, not all provisions of the directive are included in the Law yet.

The Croatian Act on the Right of Access to Information was adopted in October 2003, on the basis of Article 88 of the Constitution. Under the Act, all information possessed, disposed of or controlled by bodies of public authorities have to be available to any interested beneficiary of the right to information. The Croatian Act on Personal Data Protection is based on the constitution and dates from 2003 (Official Gazette, no. 103/2003). It has been brought in line with the European directive 95/46/EC on the processing of personal data. Under the law on State Survey and Real Property Cadastre, a working group has been set up on spatial data sharing policies, with the task to coordinate, develop and maintain an interoperable and customisable licence model that allows the spatial data providers to define and publish access conditions for their data and services. Draft versions of agreements templates for data exchange between public bodies and for access and re-use by third parties are developed.

Croatia has geodatasets which provide a basis for contributing to the coverage of pan-Europe for the INSPIRE-selected data themes and components. The geodetic reference system and projection systems are standardised, documented and interconvertible.

Metadata development is just started in Croatia. The SGA Geoportal is designed as a geospatial built on Service Oriented Architecture (SOA) principles and in line with ISO/OGC standards and specifications of the INSPIRE directive. The Geoportal includes a metadata-driven catalogue service. The catalogue contains metadata descriptions and allows users and other applications/portals for querying and finding. The implementation of metadata is still in initial implementation stage.

There is no formal national geoportal established in Croatia. The SGA Geoportal (<http://www.geo-portal.hr>) is the main point of access to distributed geoinformation resources in Croatia. Via this geoportal it is possible to search the available geodata (data, applications and services) and order them into digital form. Croatia applies the common standards of ISO/TC211 and OGC.

The freedom of access to information pertinent to permitting process is defined by the Regulation on information and participation of the public and public concerned in environmental matters (OG No. 64/08). Law on state survey and cadastre (72/09, 18/10) adopted INSPIRE Directive principles and prescribed that spatial data and information on the environment have to be available to everyone as well as the very basic GIS services.

The Anti-discrimination Act (OG,85/08) does not address potential discrimination issues like digital divide and e-literacy that might be relevant for Enviper usage in Croatia.

The Intellectual Property Rights regulations are fully harmonised with the Directive 2004/48/EC on the enforcement of intellectual and industrial property rights.

7.5 Turkish pilot

7.5.1 Issues related to use cases

Use case 10.001: Application for EIA Necessity

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
EIA Study is Submitted by the Licensed Environmental Consulting Firms or Engineers on behalf of the Applicant	<p>The license of the firms of the engineers might be suspended by the Ministry</p> <p>The information presented by the application file could be forged (forged signatures, fabricated documents)</p>	1	Article 204, 205,206,207 of the Turkish Penal Code No: 5237/2004 -
Electronic Data Usage (Uploading, exchanging documents, GIS data etc.)	<p>Security of Information and Data (Personal Data, Administrative Data)</p> <p>Accessibility Rights to the Government Services electronically</p> <p>Administrative Procedures (Stakeholders Requests, Administrative Decisions, Submittals and Transmittals don't comply the Deadlines)</p> <p>Liabilities arises due Data Usage and Storage (Industrial and Intellectual Property Rights, Protection against Espionage)</p>	1,2,3 and 4	<p>Article 4 and 6 of Turkish Law No 5809 – Law on Electronic Communication</p> <p>Article 132,135, 136 and 137 of Turkish Penal Code No:5237 : Personal Information Registry, Disclosure</p> <p>Article 4 and 8 of Regulation on Personal Information Registry and Protection of Privacy</p> <p>Turkish Law on Civil Servants No:657</p> <p>Turkish Law on Competition No:4054</p> <p>Decree on Protection of Commercial Secrets and Access Rules to the Commercial Information No:2010/3</p> <p>Turkish Law on the Right to Access Information No:4982/2003</p>

			Turkish Law No: 5651 – Regulating the internet transmission issues and combating the crimes which are conducted by internet transmission
Data Sharing with the relevant authorities and other administrative units	Confidentiality of Information is jeopardized, Classified Information	2	See Preceding Table
Publishing GIS Data of the Location of Interest	Confidential Information, Classified Information of Highly Sensitive Military Zones	1,2	Turkish Law No:2565 – Military Zones and Highly Security Areas

Use case 11.001: Checking the Application

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Electronic Data Usage (Uploading, exchanging documents, GIS data etc.)	Same As Above	1,2,3 and 4	Same As Above
The applicant has to present the application file in hard format, even the application is processed electronically.	Legal Validity of the Electronic Data and Signatures on specific Documents Application deadlines, the gathering of relevant authorities opinions, submittal and transmittals Incomplete Application Files	1,3	Turkish Law on Electronic Signature No:5070/2004 Turkish Law on Environment o:2872/1983 Regulation on Environmental Impact Assessment/2008 Turkish Law on Civil Servants No:657
Administrative Evaluation Procedures	The procedure is not compliant to the administrative Code of Procedures such as the Acceptance Criteria of EIA Reports, Reviewing Period, Deadlines, Decision Taking Procedures of the Province Dept.(Biases), Submittals and	1	Turkish Law on Environment o:2872/1983 Regulation on Environmental Impact Assessment/2008 Turkish Law on Civil Servants No:657

	Transmittals and Related Documentation)		
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Use case 12.001: EIA Letter of Information

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
The Provincial Department Decides on the Requirement of EIA	The provincial decision could be biased to/against the applicant The province takes a wrong decision due to misinformation, or lack of competent officers for satisfying check	1	Turkish Law on Environment o:2872/1983 Regulation on Environmental Impact Assessment/2008 Turkish Law on Civil Servants No:657
The Applicant Objects to the Decision and asks for explanation	The provincial staff cannot justify the decision with strong data and reasoning, the applicant faces loss of investment due to lost time etc..	1	Turkish Law on Environment o:2872/1983 Regulation on Environmental Impact Assessment/2008 Turkish Law on Civil Servants No:657

Use case 13.001: Provision of Additional Data

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Data Sharing with the relevant authorities and other administrative units for Validation of Submitted Data	Inadequate information provided by other authorities Fabricated documents misleading the provincial decision makers.	1	Article 4 and 6 of Turkish Law No 5809 – Law on Electronic Communication Article 132,135, 136 and 137 of Turkish Criminal Law No:5237 : Personal Information Registry, Disclosure Article 4 and 8 of Regulation on Personal Information Registry and Protection of Privacy

			Turkish Law on Civil Servants No:657
Electronic Data Usage (Uploading, exchanging documents, GIS data etc.)	Viruses can infect to system, damage data and circumvent data security	2	Same as Above
E-signature Usage	E-signatures are captured by malicious people	2	Turkish Law on Electronic Signature No:5070/2004

Use case 14.001: Provision of Project Presentation File

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Collecting the compulsory and necessary documentation from related authorities for the project presentation file	The authorities lack the necessary information, or provides inadequate or wrong information	1	Turkish Law on the Right to Access Information No:4982/2003 Turkish Law on Civil Servants No:657

Use case 15.001: Check for Project Presentation File

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Data Sharing with the relevant authorities and other administrative units for Validation of Submitted Data	See 13.001	1	See 13.001

Use case 16.001: Provide Cost Evidence

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
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Submitting the Bank Receipt to the Commission with a letter	The bank receipt could be forged	1	Article 204,205,206,207 of Turkish Criminal Law No:5237 : Forgery
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Use case 17.001: Provide EIA Not Required Document

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Provincial Department Staff Prepares for the EIA not Required Document	The Provincial Staff delays preparation of the document intentionally or unintentionally that causes losses of investment	1	Turkish Law on Civil Servants (No:657)
Province Faces Complaints from Competing Applicants in the same Field, Some of the Applicants Information Leaks to the Competitors	Provincial Staff biases against the other applicants, leaks classified information to the competitors	1	Article 132,135, 136 and 137 of Turkish Criminal Law No:5237 : Personal Information Registry, Disclosure Turkish Law on Civil Servants (No:657)
E-signature Usage	E-signatures are captured by malicious people	2	Turkish Law on Electronic Signature No:5070/2004

Use case 18.001: List of Applications

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist

Use case 19.001: Application Details

Transaction, stakeholders involved, data/information exchange	Ethical issue that can arise	Classify the issue according to Mullen and Horner (2004):	National legislation addressing/regulating the issue - if exist
Publishing GIS Data of the Location of Interest	Confidential Information, Classified Information of Highly Sensitive Military Zones	2	Turkish Law No 2565-Military Zones and High Security Areas
Data Sharing with all the stakeholders	Confidentiality of Information, Classified Information	2	See Preceding Tables

7.5.2 Issues related to pilot phase

Ethical issue and the action that can trigger the issue	Classify the issue according to Mullen and Horner (2004)	National and/or EU legislation addressing/regulating the issue - if exist
Misleading testing strategies due to misunderstandings and lack of communication amongst the pilots	1	NA
Disinformation of public due to the insufficient activities such as workshops, seminars and webinars	1	NA

7.5.3 Issues related to post-pilot exploitation scenario

Ethical issue and the action that can trigger the issue	Classify the issue according to Mullen and Horner (2004)	National and/or EU legislation addressing/regulating the issue - if exist
The persistence of Ministerial intentions to carry on the transactions within eTurkey initiative	1	Decree of Higher Planning Council on Information Society Strategy/2006 (Official Gazette Nr. 26242)
The integration of eEnviPer to the existing eGovernment structures and other provincial departments	1	NA
Integration with other countries	1	NA
More public involvement planned and projected by eEnviPer through the efficient use electronic media	1	See Preceding Tables on Access to Information, Privacy and Commercial Competition Rules

7.5.4 National legal framework

In Turkey, a legislation for the environment was approved and enacted in 1983, (No.2782, 11.08.1983, OG No: 18132) since then several amendments to the Environment Law was added updating the related articles in complying with the new requirements.

Environmental Impact Assessment is compulsory by law in Turkey since 1993. A Regulation was enacted in 2008 on the Environmental Impact Assessment. The regulation clearly defined the involved parties and their roles, rights and liabilities.

The eTransformation of governmental transactions initiative was introduced in 2003, and a national policy was launched towards adaptation to the electronic processing of transactions. In 2008 Law on Electronic Communication enacted (Official Gazette No: 26530). Moreover, Electronic Signature is granted legal recognition with the Turkish Law No 5070 in 2004. The access to the electronic services are supposed to be provided by the state through the Turkish Law on Free Access to the Services (Law No: 5369, Official Gazette No: 25856)

As the electronic communication becomes widespread, so does the offences, crimes and cyber attacks, hackings etc...Consequently a legislation was enacted in 04.05.2007 on Regulating the Internet Transmission Issues and Combating the Crimes Committed by Internet Transmission. (Law No: 5651, Official Gazette No:26530).

The Right to Access to Information was guaranteed by the Law on Right to Access Information that was published in Official Gazette in 2003 (Law No: 4982). However the privacy issues and commercially classified information is protected by a few regulations such as Regulation on Personal Information Registry and Protection of Privacy, Law on Competition (No:4054 Official Gazette No:) and a Decree on Protection of Commercial Secrets and Access Rules to the Commercial Information (No:2010/3). The acts and actions against the mentioned laws and regulations requires legislative actions that are codified in Turkish Penal Code (Law No: 5237, Official Gazette No: 25611) and Turkish Law on Civil Servants (No:657 ,Official Gazette No:12056)

8 Conclusions and recommendations

The deliverable has provided an overview of the results of research on ethical and legal issues in the context of eEnviPer project. First, general ethical framework is established, backed by the related EU legislature. Then, research within each pilot is completed aimed to locate general ethical issues within the defined use cases of eEnviPer, to identify specific ethical issues and to determine national legal frameworks for eEnviPer project. The identified issues are classified according to Mullen and Horner (2004) to analyse how the electronic technology affects the issues.

The analysis of the national legislations has revealed high degree of harmonization with the EU legislation. This stands for all the pilot countries, no matter if the pilot country is member of the EU (Greece, Italy), to-be-member-soon (Croatia) or a candidate country (Turkey, Serbia). This is however expected in the case of the EU member states as they are obliged to implement the EU Directives.

High level of harmonization between legislations of pilot countries also means existence of common ethical platform for those countries. It allows more general approach to ethical issues and post-project utilization in other European countries without the need of extra adjustment.

As a tool for environment related activities, eEnviPer has to be designed to ensure clear transparency of the supported processes and the solutions for effective participation of citizens, as those are two major principles of environmental decision processes.

Privacy protection is one of the major ethical issue, and is thoroughly addressed in the legislature, both EU and national ones. Although jeopardizing of privacy is an issue that exists also in offline systems, electronic environment brings special dimension to the problem. Environment permitting is a transparent process which doesn't involve, or should not involve, much of the processing of personal data. The only "identifiable natural persons" in the process are: the legal representative of investor, the consultant engaged to create EIA study and the Public Authority officials. However, we can consider this data already publicly available. For all other participants in the process-users of the eEnviPer service- the system should not collect any personal data. Practically it means that eEnviPer should:

- Allow citizens to participate anonymously and
- Not to store cookies on the users' computers to prevent any unauthorised tracking the users' activities on the Internet.
- These requirements also apply to the persons involved in the testing of eEnviPer, but in case they are involved in interviews, informed consent is required.

Considering the importance of privacy being one of the key ethical issues, an entire Task within the project is dedicated to Privacy impact assessment (T6.3) aimed to evaluate the eEnviPer solution in terms of its impact on privacy protection throughout the life of the project. The Task will result in the publication of deliverable D6.3 Privacy Impact

Assessment Report with detailed recommendations on how to deal with the issue in terms of technical design and design of pilot protocols.

Participation of the public, at the other side, could include comments and complaints that contain defamations or offensive material. In many countries it is considered a criminal act, but if done anonymously as it is the case, nobody could be charged. To avoid the problem, some kind of censorship should be exercised:

- An expert in legal and ethical issues within the Public Authority should check all comments and complaints before they are published online. However, the censorship should be tracked so the decisions can be justified on request of the users to avoid any misuse of the power.

Setting up an e-Government service inevitably results in higher or lower degree of discrimination caused by digital divide, e-Literacy and disability (physical or mental). In the case of eEnviPer, to solve the problems we defined the following requirements:

- The service should be simple and easy-to-use with clear and understandable GUIs (Graphic User Interfaces).
- Appropriate training material should be provided to different types of users. Special attention to this measure is given within the Task T4.2 Training Design & Development resulting in Deliverable D4.2 eEnviPer Training Guide.
- Assistance should be provided free of charge in the premises of the Public Authority.
- To provide technological solution appropriate for wide range of people in terms of different social background and intellectual abilities, representatives of the different groups should be involved in the testing

Secure electronic environments are essential for e-Government systems. It means that eEnviPer has to provide sufficient level of security to its users. Security requirements related to confidentiality, availability, integrity and authentication are as follows:

- Information stored in eEnviPer system or exchanged between the system and the users should be protected from unauthorised access and use (confidentiality).
- Access to and the use of eEnviPer service by authorized users should not be prevented by malicious activities (availability).
- Information stored in eEnviPer system or exchanged between the system and the users should be protected from unauthorized or malicious modification, manipulation or deletion (integrity).
- It should not be possible that unauthorised users send and store information within eEnviPer (authentication).

It is recommended however that more detailed security analysis is performed within the WP3 before security tools are set.

When it comes to the issues of Intellectual Property Rights, there are two different points in the context of eEnviPer when the issues can arise. First, IPRs of investors and consultants that provide information that are confidential or products of intellectual work should be protected. Second, IPRs of members of the eEnviPer project consortium should be protected. The first types of issues are not caused by the use of eEnviPer and can arise in offline environment as well. However, eEnviPer can provide certain tools that can minimize or prevent the issues, namely:

- The system should provide communication tools between investor/consultant and the Public Authority in order to prevent publication of confidential information (e.g. indication made by investor/consultant which part of the EIA study is confidential; Public Authority publishes the EIA study with the confidential parts hidden)
- The system should provide clear information on what parts of an EIA study are protected by IPRs (e.g. copyrights, database rights..) and the consequences of the potential misuse

The IPRs of the eEnviPer project consortium members are defined in the Consortium Agreement.

The use of GIS within environmental permitting process brings substantial benefits to the quality of the process and the environmental related decisions if GIS tools work properly and the spatial datasets are relevant, appropriate, accurate and up-to-dated. Otherwise, it may also cause harm to the process. As eEnviPer will provide GIS functionalities with number of relevant spatial datasets it is important to take into account the following recommendations:

- To avoid misinforming the users, eEnviPer should provide appropriate metadata for the spatial datasets available in the system
- eEnviPer should ensure that GIS functionalities provided by the system work properly. Thorough testing of GIS tools is necessary.

There are ethical issues related to environmental permitting procedures identified within the use cases that are not caused by the electronic nature of eEnviPer, but the technology can actually help to prevent them to arise or to reduce the risk. The examples of such issues with proposed solutions are:

- If Public Authority doesn't respect deadlines – eEnviPer warns the official working on a case on the approaching deadline,
- The applicant misses to provide all necessary information – eEnviPer will not complete application as long as all required information are provided,
- Public Authority misses to perform a necessary activity - eEnviPer warns the official working on a case on the next activity in the procedure chain

During the post-project exploitation, eEnviPer platform has to meet customers' expectation. To avoid problems in this regards, the eEnviPer consortium should:

- Create appropriate eEnviPer Service Level Agreement to define relations between service provider and customers

Finally, we recommend that responsibilities of the Project Management Board are extended to handle and solve any ethical problem that can rise during the project implementation or in the exploitation phase.